REMARKS

The Applicant thanks the examiner for a kind and thorough review of the application. Claims 1-12 have been canceled, while Applicant wishes to clarify his invention by amending claim 13 to show both a catalyst material and a syntactic cement material each reside in separate reservoirs, and are independently provided from these separate reservoirs into a dispensing head assembly (Page 16, line 2-4 and page 18, line 3-7) The materials are then mixed only within the dispensing head assembly and nowhere else. (Page 16, line 2-11) Finally, a drying agent (e.g. heating gas) is housed in a separate third reservoir, thereby prevented from being mixed within the first and second reservoirs. (Figure 1) Finally, the drying agent is only added to the dispensing head assembly as the catalyst material and structural epoxy foam material are being mixed within the head assembly (Page 16, line 20-23). This is important because mixing the drying agent in the mixing head assembly while the syntactic cement material and catalyst mix allows the dispensing foam material created from this mixing process to have a relatively constant compressibility and better control when put into a mold to harden. (Page 19, line 19-24) Since the foam compresses as it is pumped to the head (where the mixing takes place within a reservoir), and mixing the drying agent within the foam before it is pumped (to the mixing head assembly) will cause the foam to have uneven compressibility and cause the pump to expend greater and variable amounts of energy. (Page 19, line 19 – Page 20, line 4)

On the other hand, *Czaplicki* (Pat. # 6,787,579) discloses an epoxy-based component which is purposefully combined with a second amine component in a

reservoir (which is static and non agitated) and allowed to remain in the reservoir statically before being dispersed into a mold cavity. (Col. 7, line 30-43) Thus, there is no constant mixing of components while a drying agent is being added, in contradistinction to Applicant's invention, which discloses syntactic cement material and catalyst components being mixed while a drying agent is being added. Furthermore, *Drake* (Pat. # 4,131,481) discloses a method of producing structural foam wherein a glass component is purposefully mixed with an acid in the presence of water. (Col. 1, line 38-41) Here as well, we see static mixing of components in a water-based solution, and not the constant mixing in a mixing head assembly as we see in Applicant's invention. (Page 16, line 20-23) Moreover, *Drake* discloses curing of the cement mixture within a mold either by blowing it with air or nitrogen (Col. 2, line 14-16) or incorporating a blowing agent into the cement mass already formed. (Col. 2, line 17-19) Once more, *Drake* discloses static curing of the mixture with a blowing agent in contradistinction to our invention where curing takes place only with a drying agent while the mixture is being mixed from reservoirs one and two.

Secondarily, Applicant wishes to fully clarify his invention by stating that his claimed invention utilizes an external source of heated air as a drying agent (or cure accelerator) in contradistinction to the prior art in which the mixture generates heat. (Page 18, line 11, and see new claim 23) As the *Czaplicki* invention discloses an exothermic reaction (Col. 3, line 39-42), the gas is heated as a result of this reaction and not because of any positive external stimulus. This heating occurs during the cure reaction between the epoxy resin and the curing agent as a considerable amount of

heat is generated, contrary to Applicant's invention which provides for a process of heating gas before mixing this gas to the mixture within the mixing head assembly. (Col. 3, line 39-42) Therefore, Applicant's invention differentiates over *Czaplicki* in that Applicant positively uses heating gas as a drying agent which results in a density reduction of the mixed material exiting the dispensing assembly and thereby reducing the possibility or likelihood of material slumping or a loss of character features. (Page 20, line 8-14), while *Czaplicki's* invention allegedly generates heat and requires the control of such heat as being important to prevent the foam material from being charred on one surface. (Col. 3, line 39-51)

Therefore independent claim 13, for the foregoing reasons, should be allowable as written. Furthermore, dependent claims 14-29 depend upon independent claim 13 and should also be allowable as written.

If there are any further questions regarding this matter, please call the Applicants' undersigned Attorney at (248) 324-7787.

Respectfully submitted,

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CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8

I, Octavio DaCosta, do hereby certify that the foregoing Response to Office Action is being deposited with the United States Postal Service as First Class Mail, to the Box Response: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 3rd day of July, 2007.

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